

IN THE CLAIMS:

Please cancel claims 1, 3-6, without prejudice.

Please amend the claims as follows:

Claims 1, 3-6 (Cancelled)

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1 1. ~~1~~ (Currently amended) [The method of claim 6 further comprising:]
2 A method of aligning a fiber optic bundle with an array waveguide comprising:
3 inserting pins into holes formed in both the fiber optic bundle and the array
4 waveguide, wherein the holes formed in the fiber optic bundle are formed by
5 placing two etched substrates together; and
6 pressing the fiber optic bundle and the array waveguide together so that the
7 pins extend into both the fiber optic bundle and the array waveguide; and
8 finely aligning optical fibers in the fiber optic bundle with channels of the
9 array waveguide; and
10 permanently bonding the fiber optic bundle to the array waveguide.

1 2. ~~2~~ (Currently amended) The method of claim ~~7~~, wherein permanently bonding the
2 fiber optic bundle to the array waveguide further comprises [comprising]:
3 applying an epoxy to bond the fiber optic bundle to the array waveguide.

1 3. ~~3~~ (Original) The method of claim ~~8~~ further comprising:
2 dispensing an optical gel between the fiber optic bundle and the array
3 waveguide.

1 4. ~~4~~ (Original) The method of claim ~~9~~, wherein the optical gel has an index of
2 refraction substantially similar to channels in the array waveguide.

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5. ~~11.~~ ⁴ (Original) The method of claim ~~10~~ further comprising:
curing the epoxy while maintaining alignment between the optical fibers and
the channels of the array waveguide.

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7. ~~12.~~ (Currently amended) A method of aligning a fiber optic bundle with an array
waveguide comprising:
coarsely aligning the fiber optic bundle with the array waveguide by
inserting two pins into holes formed in an end of the fiber optic bundle,
wherein the holes formed in the fiber optic bundle are formed by placing two
etched substrates together,
inserting opposite ends of the two pins into the array waveguide, and
pressing the fiber optic bundle and the array waveguide together, and
finely aligning the fiber optic bundle with the array waveguide by adjusting
the fiber optic bundle and the array waveguide to improve photonic coupling
between optical fibers of the fiber optic bundle and channels of the array
waveguide; and
permanently bonding the fiber optic bundle to the array waveguide.

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8. ~~14.~~ ⁷ (Currently amended) The method of claim ~~12~~ ⁷, wherein permanently bonding
the fiber optic bundle to the array waveguide further comprises [comprising]:
dispensing an epoxy between the fiber optic bundle and the array waveguide.

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9. ~~15.~~ ⁸ (Original) The method of claim ~~14~~ ⁸, wherein the dispensing the epoxy is
performed by dispensing an epoxy having an index of refraction substantially similar to
the channels of the array waveguide.

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16. (Currently amended) The method of claim [6] 7, wherein the two etched

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substrates are placed together to form multiple holes, and the multiple holes are filled by

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optical fibers except for the holes with the pins inserted in them.

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17. (Previously added) The method of claim 12, wherein the two etched

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substrates are placed together to form multiple holes, and the multiple holes are filled by

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optical fibers except for the holes with the pins inserted in them.

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